

MSG 122A - RED FD09 PAYLOAD SUMMARY

FREESTAR

MEIDEX continues to take great Sprite science. The playback of Orbit 88 looked like one of the best storms yet. During the last Sprite observation yesterday (orbit 114), different filter and gain settings were tested, but no clear improvement over previous configurations was observed.

SOLCON has just completed another pair of solar observations, completing more than 50% of their pre-mission objectives.

CVX continues to perform well. Critical Period #3 will begin at 08/16:00 MET.

LPT has completed another successful day with 14 events. Future spacecraft operational communication scenarios are being demonstrated, adding confidence in this new technology for future missions. The 3rd GPS navigation pass went well with no operator intervention required, giving Orbiter position measurements within +/-20 m.

SPACEHAB

SPACEHAB subsystems are nominal. EECOM believes that there is currently as much as 3 lbs of condensate that have not been accounted for after the initial cleanup of the rotary separator spill. An IFM is in development to vacuum any remaining water out of the WSA noise cover and tape up gaps in the cover prior to entry prep.

Specific payload highlights so far include:

CM2 SOFBALL activities are progressing more smoothly now that the initial setup gremlins have been dealt with. So far we have seen the longest-burning flame ball at 20 minutes, the weakest flame ever at 0.5 Watt (a birthday candle is 50 Watts), and the leanest burning mixture ever (3.2% hydrogen in air).

The BDS-05 cell culture is growing at a phenomenal rate. Our thanks for the added effort of both teams in performing MSG 55 and in changing the spin filter rate to accommodate the size of the tissue constructs. We appreciate the excellent work and attention to our payload.

Biopack is switched off following two unexpected power downs. Of the experiments that were stored in the incubator and in the cooler, one (BONES) has been transferred to one +5C PTCU and science has been completed. Two other experiments (STROMA and CONNECT-1) may be considered lost as the last medium exchange and fixation were not completed. CONNECT-2 may still have some science output since the loss is limited to the 1-g reference. We are looking at our options for restoring Biopack functionality at this time.

ARMS has successfully performed the planned mid-mission measurement sessions, PULMO 2 and MUSC 1B. This means that slightly half of the ARMS measurements have been completed. The payload continues to perform flawlessly, and it is anticipated that excellent data is being collected.

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